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ABSTRACT

A study (1) surveyed the views of educators and textbook publishers regarding suitable reading levels of textbooks used for instruction in reading and content area subjects; (2) examined preferences for difficulty of reading textbooks considering students' achievement levels and for reading content area textbooks when selections are made for individual students, groups, and classes; and (3) examined techniques and testing methods used by educators and publishers to determine suitable reading levels. The sample survey consisted of 98 publishers and 303 elementary school educators. Results indicated that while both groups considered suitable reading level in textbooks important, educators placed a great deal more emphasis on it than did publishers. Techniques used by educators and publishers for evaluating reading levels were quite similar, with the major difference being that educators used the evaluation of concepts most frequently and publishers used this technique least often. (HTH)

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The Difficulty of Textbooks for the Elementary Grades: A Survey of Educators' and Publishers' Preferences

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The Difficulty of Textbooks for the Elementary Grades:
A Survey of Educators' and Publishers' Preferences

The relationship between the level of difficulty of written materials and characteristics of students for whom the materials are intended is an important concern for direct reading instruction and instruction in content subjects. Research evidence has shown that the level of text difficulty in terms of readability, vocabulary, and syntactic complexity can affect students' achievement in reading and their learning of content (Chall, Conard, and Harris, 1977). There is also evidence that the difficulty level of materials read to or read by elementary age children influences their long-term linguistic development (Chomsky, 1972).

For many years, reading educators (Betts, 1946; Harris and Sipay, 1975) have advocated that students' learning and achievement is enhanced by the use of reading materials at suitably difficult levels. On the other hand, undesirable outcomes are predicted if materials at less than suitable levels - either too easy or too difficult - are used. What has not been determined from research studies or clearly defined by reading authorities is the optimal level of difficulty - that is, the level of difficulty considered most suitable for developing reading skills and for learning content.

The present study was undertaken to investigate current ideas of suitable difficulty for written materials by surveying preferences for reading levels in elementary school textbooks in relation to particular student characteristics and classroom situations.

Theoretical Background

Appropriate match is an important component of many prominent theories of learning and development (Piaget, 1964, 1968, 1970; Vygotsky, 1962, 1978) and

theories of instruction and school learning (Bruner, 1960, 1966; Carroll, 1963; Bloom, 1964, 1976). Somewhat different conceptions regarding what constitutes an appropriate match are, however, revealed in these theories. That is, views of the relationship between the difficulty of instruction or learning and characteristics of the intended learner appear to differ slightly. Descriptions offered by Carroll (1963, p. 726) and Bloom (1976, p. 11) seem to suggest that the difficulty level of instruction should be consistent with existing developmental levels of the student, whereas Bruner (1960, p. 52) and Vygotsky (1962, p. 52) strongly recommend a difficulty level in advance of the learner's stage of development. Piaget's view of the relationship is not clearly addressed in his own writings. Some of his students interpret his position as similar to that proposed by Bruner and Vygotsky (McNally, 1976) while others interpret his view to be the same as that of Carroll and Bloom (Sullivan, 1967).

Although a less than consistent view is revealed among these theories of the relationship existing in the "match", there is strong agreement that the relationship may vary.[1] According to all the theories reviewed, the relationship may be altered depending upon developmental stages and cognitive and affective characteristics of the learner as well as upon conditions existing in the learning situation.

Related Research

New avenues of research, such as investigations in propositional analysis (Kintch, 1974) are adding to current knowledge of complexity in written text. Traditionally, however, most research on text difficulty has dealt with vocabulary and readability. Studies of suitable difficulty levels usually have consisted of analyses of text with readability formulas or by comparisons to vocabulary lists. From these analyses, estimates of suitability for particular students or groups are made. The use of the cloze procedure (Taylor, 1953) for

determining suitable difficulty levels in text has been given attention in recent years (Bormuth, 1971). Generally, studies of cloze have identified performance scores for use with the procedure consistent with the instructional criterion of 75% comprehension originally presented by Betts (1946) in association with the Informal Reading Inventory.

Some observational studies have investigated whether instructional materials assigned to students in elementary classrooms are of suitable difficulty levels (Rubin, 1975; Jorgenson, 1977). In these studies, comparisons were made between students' standardized reading test scores and publishers' assigned grade levels or readability scores for reading textbooks used by the students. Generally, these studies give evidence that little accommodation is made in classrooms to select textbooks according to students' reading ability levels, particularly students reading at advanced levels.

Only a few classroom studies have investigated the influence of experimentally varying difficulty in text on students' learning or achievement to make specific statements regarding suitable difficulty levels. Gates (1930) related the number of different words taught in basal reading textbooks to the reading progress of bright, average, and slow first grade students to make recommendations for the rate of introduction of vocabulary for beginning reading students. Bormuth (1971) used a measure of information gained by students reading passages from textbooks to recommend cloze performance standards for textbook, reference, and voluntary reading.

Overall, studies conducted in classrooms agree that instruction at suitable levels of difficulty is positively related to students' gains in reading (Chall and Feldman, 1966; Brophy and Evertson, 1976) as well as their progress in other subject areas (Jones, 1948; Marliave and Filby, 1980). Yet, as with other research studies, information from classroom studies offer less than a clear understanding of the difficulty level in written text that is optimal for encouraging students'

achievement or progress.

Rationale

The present study investigates two groups who share in the responsibility for providing instructional materials of suitable difficulty for elementary school students.[2] School administrative personnel, including curriculum and reading specialists and principals, and classroom teachers make final selections of instructional materials for students. And, during the process of publication, educational publishers make decisions that influence the range of difficulty levels from which educators make their selections. The study, therefore, surveys views of educators, represented by classroom teachers and curriculum specialists, and elementary textbook publishers regarding suitable reading levels in textbooks used for reading instruction and for instruction in content subjects (science and social studies). The study also examines preferences for difficulty in reading textbooks considering students' achievement levels (high, middle, and low) and for reading, science and social studies textbooks when selections are made for individual students, groups, and classes. Finally, the study examines techniques and testing methods used by educators and publishers to determine suitable reading levels. Specific questions addressed by the study are:

1. How important do educators and publishers consider suitable reading levels in textbooks - levels that are matched to students' abilities and interests - in comparison to other considerations in textbook selection and production?

2. What preferences are expressed by educators and publishers for difficulty in textbooks used for reading instruction in comparison to those used for instruction in science and social studies?

3. What preferences are expressed by educators and publishers for difficulty in reading textbooks compared to students' reading achievement levels?

4. What preferences are expressed by educators for difficulty in reading, science, and social studies textbooks when selections are made for individuals, groups, and classes?

5. What techniques are used most frequently by educators and publishers to evaluate difficulty in textbooks? What testing methods are used to determine that students are using textbooks of suitable difficulty levels?

Methodology

The sample surveyed by the present study consisted of 98 publishers, selected to represent the entire elementary school textbook publishing industry,[3] and 303 elementary educators - curriculum specialists and classroom teachers, grades 1 to 3 and grades 4 to 6. Educator respondents were selected by a nationwide, random process representing states according to textbook adoption procedures and schools, according to metropolitan levels.[4]

All information was collected through questionnaires mailed to named respondents. Instruments were first piloted by publishing representatives and groups of teachers and specialists. At prescribed intervals following the initial mailing, follow-up letters, cards, and telephone calls were utilized. An overall response rate of 63% was achieved.

To analyze response data, frequency distributions were calculated for all items according to replies of educators and publishers and those of sub-groups identified from previous research as possibly relative to the present study. Responses between groups were examined with crosstabulational analyses; chi square and Cramer's V were used as measures of association.

Characteristics of Respondents

Thirty-five percent of the educators who responded to the survey are primary grade teachers, 33% are teachers in upper elementary grades, and 32% are curriculum specialists. According to school metropolitan levels for teachers, 30% of those responding teach in urban schools; 35% teach in suburban schools; and 35% teach in rural schools.

Among publishers responding to the survey, 56% are administrative personnel,

26% are language arts or reading editors, and 18% are science or social studies editors.

Quite a high level of professional experience is reported by all respondents to the survey, both educators and publishers. Sixty-eight percent of the publishers and 66% of the educators have at least eleven years of professional experience. All respondents also report quite a high level of educational attainment. Over fifty percent of both educators and publishers have masters degrees and only slightly less than ten percent hold doctoral degrees.

Findings from Primary Analysis

1. How important do educators view a suitable reading level - one that is matched to students' abilities and interests - in the selection of textbooks? How accurately do publishers predict educators' views? [5] (Table 1)

Almost 60% of the educator respondents place greater importance on a suitable reading level than on all other considerations in textbook selection presented by the survey. And 75% of the educators consider suitable reading level of greater importance than all but three items - similarity of textbook and school objectives, appropriate concepts and ideas, and appropriate content. Thus, their responses reveal that a suitable reading level is a consistent and particularly important concern for educators in their selection of textbooks for students.

Responses of publishers show that while they are aware of educators' concern for suitable reading levels in textbooks, they may not fully realize the strength of this concern. That is, although about 40% of the publishers predict the direction of educators' views of the importance of suitable reading level to all but one item shown in Table 1, they consistently underestimate views expressed by educators. The extent of their underestimation is reflected by significant chi square values for almost one-half of the items presented.

2. How important do publishers consider suitable reading level in elementary textbooks compared to other publishing concerns? (Table 2)

TABLE 1

The Importance of Suitable Reading Level
Educators' Responses and Publishers Predictions[1]

Categories and Items Representing Considerations Investigated	VIEW OF SUITABLE READING LEVEL							
	EDUCATORS				PUBLISHERS			
	Much More Important	More Important	Less Important	Much Less Important	Much More Important	More Important	Less Important	Much Less Important
(1) PHYSICAL FEATURE CONSIDERATIONS								
(a) Suitable book size & format	40%	37%	19%	5%	23%	54%	20%	3%
(b) Suitable type & print size	25	56	17	2	15	62	22	2
(2) COST AND REPLACEMENT CONSIDERATIONS								
(a) Cost factors*	43	33	20	6	19	51	25	6
(b) Durability	36	44	15	5	28	49	19	4
(c) Recent copyright date*	38	42	18	2	17	47	31	6
(3) TEACHING EFFECTIVENESS CONSIDERATIONS								
(a) Adequate provision of practice activities	25	64	10	0	6	46	46	2
(b) Adequate support materials (ditto masters, audio-visual aids, etc.)	33	54	13	1	40	44	11	4
(c) Availability of program-related tests	43	37	16	5	26	47	21	6
(d) Good Teachers Manual*	31	48	18	3	10	40	49	1
(4) TEXT APPROPRIATENESS CONSIDERATIONS								
(a) Clearly stated learning outcomes	24	56	18	2	17	59	19	4
(b) Evidence of classroom pre-testing	26	50	22	2	31	61	6	3
(c) Fair treatment of race, sex, ethnic groups*	25	46	24	6	7	40	50	3
(d) Similarity of book and school objectives*	20	40	39	1	2	40	56	3
(5) TEXT CONTENT CONSIDERATIONS								
(a) Appropriate concepts and ideas*	20	40	39	1	1	40	56	3
(b) Appropriate content*	19	38	39	1	1	25	71	3
(c) Good organization*	19	54	19	2	6	56	37	2
(d) Relevant illustrations*	25	54	19	2	11	66	23	0

[1] Educators' Question: In general, when you select textbooks for instructing your classes, how important is a SUITABLE READING LEVEL - one which is "matched to the reading abilities and interests of the students - compared to other considerations in textbook choice listed below?

Publishers' Question: In your estimation, how important do your elementary textbook customers consider SUITABLE READING LEVEL - one which is matched to the abilities and interests of students who use the book - compared to other considerations in textbook choice listed below?

*Significant x^2 for the 2 x 4 Tables created: Educators, Publishers by four levels of importance ($p < .01$).

Over 50% of publisher respondents consider suitable reading level more important than seven of twelve items presented in Table 2, although the greatest percentage that rate it as much more important than any other item is 14%. Thus, while publishers consider suitable reading level an important issue in textbook production, their responses do not appear to suggest it to be a particularly important concern. In comparison to educators' views shown in Table 1, publishers' concern for suitable reading level appears less strong and less consistent. Whereas over 75% of the educator respondents consider a suitable reading level more important than all but three other considerations in textbook selection, no item in Table 2 represents as many as 70% of publishers' responses - in either direction. Publishers' views of suitable reading level in comparison to other publishing concerns also appear similar to their predictions of educators' views. That is, they appear to have expected educators' responses to be more similar to their own - with less emphasis on the primary importance of suitable reading level in comparison to other considerations presented.

3. What preferences for reading levels are expressed when different subject areas are considered - reading textbooks compared to science and social studies textbooks? (Table 3)

Educators' and publishers' preferences for difficulty in science and social studies textbooks compared to reading textbooks are quite similar and no differences between their preferences are revealed by statistical tests. Over 40% of both educator and publisher respondents prefer science and social studies textbooks to be the same difficulty as reading textbooks intended for the same grade. Almost as many educators and publishers - over 35% - however, prefer that science and social studies textbooks be somewhat less difficulty than reading textbooks. Thus, while slightly more educators and publishers prefer similar difficulty levels for reading, science, and social studies textbooks, strong preferences are also expressed for somewhat less difficult reading levels for science and social studies textbooks in

TABLE 2

Publishers' Views of Suitable Reading Level Compared to Other Publishing Concerns[1]

Categories and Items Representing Considerations Investigated	VIEW OF SUITABLE READING LEVEL			
	Much More Important	More Important	Less Important	Much Less Important
(1) PHYSICAL FEATURE CONSIDERATIONS				
(a) Lay-out and typography design*	10%	56%	22%	0%
(2) COST CONSIDERATIONS				
(a) Publication costs	6	52	27	4
(b) Publication time schedules	14	53	21	3
(3) PERSONNEL-RELATED CONSIDERATIONS				
(a) Selection of authors	6	53	29	3
(b) Selection of editors	6	52	33	1
(4) TEACHING EFFECTIVENESS CONSIDERATIONS				
(a) Usability of Teacher Manual or Guide	10	34	46	0
(5) TEXT APPROPRIATENESS CONSIDERATIONS				
(a) Treatment of race, sex, ethnic groups	3	32	48	4
(b) Treatment of sensitive topics, e.g. creation, reproduction	7	37	44	6
(6) TEXT CONTENT CONSIDERATIONS				
(a) Choice of content	1	21	69	0
(b) Choice of illustrations, charts, maps, graphs	7	58	30	0
(c) Organizations of chapters, sections, etc.	7	47	40	0
(d) Quality of writing	1	22	57	6

[1]Question: How important do you consider SUITABLE READING LEVEL in elementary textbooks compared to each of the following publishing concerns?

*Non-response percentages not included

TABLE 3

Educators' and Publishers' Preferences for Reading Levels in Science and Social Studies Textbooks[1]

Textbook	Sample Groups	Reading Level Compared to Reading Level of Reading Text				
		Much Higher	Somewhat Higher	The Same	Somewhat Lower	Much Lower
Science	Educators	0%	27 (16)*	73 (44)	61 (37)	6 (4)
	Publishers	0	10 (15)	29 (42)	29 (42)	1 (1)
Social Studies	Educators	0	27 (16)	76 (45)	58 (35)	7 (4)
	Publishers	0	9 (13)	34 (49)	25 (36)	1 (1)

[1]Question: Compared to the reading level of their Reading textbooks, what reading level do you think is most suitable for your students' Science and Social Studies textbooks?

*Numbers in parentheses indicate percentages

comparison to reading textbooks.

4. What preferences are expressed for reading levels of reading textbooks when variations exist in students' reading achievement levels? (Table 4)

High reading achievement groups: Over 75% of the educator and publisher respondents prefer that the difficulty level of reading textbooks be in advance of the achievement level of high reading achievement groups. Significantly more educators than publishers (29% compared to 6%) prefer an even higher reading level in comparison to this groups' achievement level.

Middle reading achievement groups: About 50% of the educator and publisher respondents prefer that the difficulty of reading textbooks be slightly higher than the reading achievement level of middle reading achievement groups. A large percentage of all respondents (36% educators, 45% publishers) also prefer a difficulty level equal to this group's achievement level; a much greater percentage than expressed this preference for high reading achievement groups.

Low reading achievement groups: Forty-two percent of educator respondents and 32% of the publisher respondents prefer the difficulty level in reading textbooks to be equal to the reading achievement level of low reading achievement groups. A large percentage of both educators and publishers also express preferences for less difficult textbooks in comparison to achievement levels for this group (37% educators and 37% publishers). Nowhere near as large a percentage express this preference for high or middle reading achievement groups.

5. What preferences are expressed by educators for reading levels in textbooks for instructing groups, classes, or individual students? (Tables 5 and 6)

Table 5 shows that close to 70% of the educator respondents prefer the difficulty of reading, science, and social studies textbooks to be matched to the reading abilities of middle achievement groups for small or large groups or for class instruction. Some trends are revealed for responses of educators who do not express this preference. There appears to be a tendency to prefer less

TABLE 4

Reading Level of Reading Textbooks for Three Groups According to Reading Achievement: Educators' Publishers' Preferences[1]

Students Grouped According to Reading Achievement Levels	Sample Groups	Reading Level of Reading Textbook				
		Much Higher	Somewhat Higher	The Same	Somewhat Lower	Much Lower
I. High Reading Achievement Group**	Educators	49 (29)*	80 (48)	33 (20)	6 (4)	0
	Publishers	4 (6)	49 (78)	9 (14)	1 (2)	0
II. Middle Reading Achievement Group	Educators	3 (2)	82 (51)	58 (36)	19 (12)	0
	Publishers	0	29 (48)	27 (45)	4 (7)	0
III. Low Reading Achievement Group	Educators	0	31 (21)	63 (42)	42 (28)	14 (9)
	Publishers	0	17 (30)	18 (32)	17 (30)	4 (7)

[1]Question: Compared to the students' reading level, the textbook reading level should be:

*Numbers in parentheses indicate percentages

**Significant x^2 for the 2 x 5 Tables created

TABLE 5

Educators' Preferences for Textbook Reading Levels
for Groups Varied in Size:
Reading, Science, Social Studies[1]

Size of Group	Subject Area	Preferences that Textbook Reading Level Be Matched to the Reading Achievement of:		
		Higher Achieving Students	Middle Achieving Students	Lower Achieving Students
Class (20 or more)	Reading	14 (8)*	145 (83)	16 (9)
" "	Science	13 (8)	122 (71)	38 (22)
" "	Social Studies	14 (8)	127 (74)	31 (18)
Large (10 to 19 students)	Reading	20 (11)	144 (81)	13 (7)
" "	Science	15 (9)	130 (75)	28 (16)
" "	Social Studies	15 (9)	130 (76)	27 (16)
Small (2 to 9 students)	Reading	38 (22)	113 (66)	20 (12)
" "	Science	25 (14)	116 (67)	32 (19)
" "	Social Studies	27 (15)	121 (69)	27 (15)

[1]Questions: WITH A CLASS OF STUDENTS (20 or more) I would match the textbook reading level to the reading level of the:

WITH A LARGER GROUP OF STUDENTS (10 to 19) I would match the textbook reading level to the reading level of the:

WITH A SMALL GROUP OF STUDENTS (2 to 9) I would match the textbook reading level to the reading level of the:

*Numbers in parentheses indicate percentages

TABLE 6

Educators' Preferences for Textbook Reading Level for Individual Instruction
Reading, Science, Social Studies[1]

Subject Area	Textbook Reading Level Compared to Students' Reading Achievement				
	Much Higher	Somewhat Higher	The Same	Somewhat Lower	Much Lower
Reading	7 (4)*	81 (46)	75 (42)	13 (7)	1 (1)
Science	1 (1)	36 (20)	92 (52)	45 (26)	2 (1)
Social Studies	2 (1)	38 (22)	95 (54)	37 (21)	3 (2)

[1]Question: For an individual student whose reading achievement level you know, what reading level do you generally choose for his/her Reading, Science and Social Studies textbook?

*Numbers in parentheses indicate percentages

less difficult science textbooks for all groups, regardless of size. Similar preferences are seen for social studies textbooks used for large groups or classes, but not for small groups. A different trend appears in preferences for reading textbooks. As the number of students in the groups decrease, more educatore prefer reading textbooks to be more difficult in relation to students' achievement levels.

Trends similar to those just described are shown in Table 6, where preferences of educators for individual students in different subject areas are compared. For reading textbooks, nearly 50% of the educator respondents prefer slightly more difficult textbooks in comparison to a student's reading achievement level. For social studies and science textbooks, however, over 50% prefer difficulty the same as a student's reading achievement level. Preferences for slightly less difficult science textbooks than for social studies textbooks are also revealed in preferences for individual students.

6. What techniques are used most frequently by educators and publishers to evaluate difficulty in textbooks?[6] (Tables 7 and 8)

To evaluate difficulty in textbooks, 85% of the educator respondents most frequently examine the number and difficulty of concepts and ideas that are presented. Educators also frequently use readability formulas, graded word lists, and try out books with students to evaluate their difficulty. Educator respondents rely most frequently upon their own judgments regarding difficulty in textbooks. They also depend upon publishers' assigned grade levels and the recommendations of their co-workers, supervisors, and principals, but less often than upon their own judgments.

All publisher respondents rely strongly on graded word lists to evaluate difficulty in textbooks. Theories from learning and education, readability formula scores and counts of vocabulary repetitions are also frequently used by publishers. Judgments of teachers and students regarding difficulty are relied upon slightly more often than are judgments of authors and editors. Publishers depend least

TABLE 7

Techniques Used by Educators for Judging Reading Levels [1]

Technique	FREQUENCY OF USE				
	Always	Often	Seldom	Never	No Response
A. Apply Readability formula	30 (17)*	79 (43)	45 (25)	22 (12)	6 (3)
B. Compare vocabulary to graded word Lists	20 (11)	92 (51)	49 (27)	16 (9)	5 (3)
C. Count number of letter (phonic) combinations	4 (2)	30 (17)	83 (46)	60 (33)	5 (3)
D. Examine number and difficulty of concepts and ideas	68 (37)	88 (48)	16 (9)	5 (3)	5 (3)
E. Discuss book with students	24 (13)	59 (32)	74 (41)	20 (11)	5 (3)
F. Informally tryout book with students	33 (18)	88 (48)	46 (25)	9 (5)	6 (3)
G. Rely on recommendations of co-workers	23 (13)	107 (59)	42 (23)	5 (3)	4 (2)
H. Rely on recommendations of supervisor, principal	20 (11)	90 (50)	57 (31)	8 (4)	6 (3)
I. Use publishers assigned grade level	13 (7)	124 (68)	30 (17)	10 (6)	5 (3)
J. Use my own judgment	61 (34)	101 (56)	10 (6)	5 (3)	5 (3)

[1] Question: How frequently do you use the following techniques or aids to help you decide that the reading levels of textbooks are suitable for your students?

*Numbers in parentheses indicate percentages

TABLE 8

Techniques Used by Publishers for Judging Reading Levels[1]

Technique	FREQUENCY OF USE				
	Always	Often	Seldom	Never	No Response
A. Comparison of vocabulary to graded Word Lists	53 (73)*	20 (27)	0	0	0
B. Counts of vocabulary repetitions	33 (45)	30 (41)	10 (14)	0	0
C. Counts of letter (phonic) combinations	14 (19)	36 (49)	15 (21)	8 (11)	0
D. Evaluation of concept difficulty and density	1 (1)	12 (16)	42 (58)	17 (23)	1 (1)
E. Judgment of authors and editors	38 (52)	30 (41)	5 (7)	0	0
F. Judgment of marketing representatives	8 (11)	33 (45)	26 (36)	4 (6)	1 (1)
G. Judgment of teachers and students	49 (67)	20 (27)	3 (4)	1 (1)	0
H. Judgment of specialists and consultants	15 (21)	30 (41)	21 (29)	6 (8)	1 (1)
I. Readability formula scores	20 (27)	45 (62)	7 (10)	1 (1)	0
J. Theories from Learning and Education (Piaget, Bloom, etc.)	20 (27)	46 (63)	5 (7)	2 (3)	0

[1]Question: How frequently are the following methods used to confirm decisions regarding suitability of reading levels for your elementary textbooks?

*Numbers in parentheses indicate percentages

frequently upon judgments of marketing representatives.

The most striking difference between responses of educators and publishers regarding techniques used to evaluate difficulty in textbooks is that the technique used most often by educators - evaluations of conceptual difficulty - is used least frequently by publishers.[7] Readability formulas and graded word lists are used by both groups, but more frequently by publishers. Judgments regarding difficulty, particularly judgments of educators, are relied upon quite heavily by both publishers and educators.

8. What testing methods are used by educators and publishers to determine that textbooks are of suitable difficulty? (Table 9)

Almost three-fourths of publisher respondents use multiple choice tests most often when textbooks are tried out with students. Over three-fourths of educator respondents most frequently use oral reading tests to check reading levels with students. Thus, significant associations are reached for publishers' and educators' use of these testing methods. These differences seem to show that publishers may more often rely on group tests of silent reading performance in their try-outs, whereas educators more often depend upon individual students' oral reading performance.

Findings from Secondary Analysis (Table 10)

Analyses of responses to questions asked of both publishers and educators were made to determine whether more or less experience and training are associated with particular patterns of responses. Analysis was also conducted for responses of urban and non-urban teachers and responses of specialists, primary teachers, and upper elementary teachers were compared. A summary of the findings for these comparisons are shown in Table 10.

No strong differences are found between responses of the various sub-groups examined and no consistent trends are indicated. Differences in levels of

TABLE 9

Frequency of Use of Three Testing Methods for Trying Out Reading Levels According to Educators and Publishers[1]

		FREQUENCY OF USE			
Testing Method	Group	Always	Often	Seldom	Never
I. Cloze tests	Educators	9 (6)*	53 (32)	48 (29)	55 (33)
	Publishers	2 (4)	16 (32)	21 (42)	11 (22)
II. Multiple choice tests **	Educators	6 (3)	69 (41)	53 (32)	42 (25)
	Publishers	2 (4)	35 (67)	8 (15)	7 (10)
III. Oral reading tests**	Educators	50 (29)	83 (49)	25 (15)	12 (7)
	Publishers	1 (2)	20 (39)	18 (35)	12 (24)

[1] Educators' Question: How frequently do you use the following testing methods to see if the reading level of a textbook is suitable for your students' instruction?

Publishers' Question: If learner verification studies are used to check the suitability of reading levels, how frequently is each of the following testing methods used?

*Numbers in parentheses indicate percentages

** Significant x^2 for the 2 x 4 Tables created

TABLE 10

Summary Chart of Secondary Analyses Findings

Comparisons Made	Reading Textbooks for Groups by Achievement	Science and Social Studies Textbooks Compared to Reading Textbooks	Instructional Groups by Size and Subject Area	Individual Instruction
Educators and Publishers by Experience	Least experienced respondents prefer higher reading level for middle reading achievement group ($p < .01$)	Trend suggested that more experienced respondents prefer slightly higher reading levels ($p < .06$, $p < .01$)	Question not asked	Question not asked
Educators and Publishers by Courses Taken	Respondents who have taken fewer courses prefer higher reading level for high reading achievement group ($p < .05$)	No differences indicated	Question not asked	Question not asked
Educators and Publishers by Workshops Attended	No differences indicated	No differences indicated	Question not asked	Question not asked
Teachers by Metropolitan Status of Schools	Trend suggested for non-urban teachers to prefer slightly higher reading level for low reading achievement group ($p < .1$)	No differences indicated	Trend suggested for non-urban teachers to prefer slightly higher reading levels for classes in reading, science, and social studies ($p < .1$, $p < .02$, $p < .1$) Non-urban teachers match to middle achieving students in reading and in science for small groups. More of both groups match to higher rather than to lower achieving students ($p < .003$, $p < .1$)	Trend suggested that non-urban teachers prefer higher reading levels in reading and science ($p < .1$, $p < .1$)
Educators by Position	No differences indicated	Teachers in Grades 4-6 prefer higher reading levels in social studies textbooks ($p < .02$)	For small groups, teachers in grades 1-3 and 4-6 prefer higher levels for reading; teachers in grades 4-6 prefer higher levels for science and social studies than do instructional specialists ($p < .003$, $p < .001$, $p < .001$)	No differences indicated

experience and training of respondents to the present study do not appear to be associated with any pattern of responses.

There are some suggestions in the data that differences may exist in the responses of teachers in urban and non-urban schools. When differences are shown, they tend to indicate that teachers in non-urban schools prefer slightly more difficult textbooks than do teachers in urban schools. Some differences are also revealed in the comparison of responses of classroom teachers and curriculum specialists. When differences occur in these comparisons, upper elementary teachers tend to prefer slightly more difficult textbooks than do primary teachers or curriculum specialists and all classroom teachers - both upper elementary and primary - tend to prefer slightly more difficult textbooks than do curriculum specialists.

Discussion and Recommendations

Findings of the present study suggest that current views of suitable difficulty in textbooks held by educators and elementary textbook publishers are primarily consistent. The greatest difference shown by responses of educators and publishers is that while both groups consider suitable reading level in textbooks important, educators place a great deal more emphasis on its importance than do publishers. One might speculate that differences in responses of educators and publishers to this question are influenced to a great extent by conditions inherent in their respective professions. That is, educators, at any given grade level, are faced daily with selecting instructional materials for students representing a wide range of reading abilities. Thus, the availability of materials that are suitable for individual reading abilities is particularly important. Publishers, on the other hand, may be constrained by practical and economic conditions to try to produce textbooks that meet the needs of the largest groups of students. If concerns for suitable difficulty levels in textbooks are as strong among all educators as is revealed by the present sample, one might speculate whether this concern is being

communicated to publishers who, according to present data, underestimate the strength of educators' concern regarding this issue.

In general, techniques used for evaluating reading levels by educators and publishers are also quite similar. The major difference revealed is in the use of evaluations of concepts, the technique used most frequently by educators and least frequently by publishers. One explanation for this difference may be that quantifiable measurement for conceptual complexity in written text has yet to be determined. Publishers, therefore, may find conceptual complexity difficult to define, whereas educators may use evaluations of conceptual difficulty as a part of their judgmental evaluations of difficulty. Given the importance placed upon this aspect of difficulty by educators, however, this finding suggests a directional effort for researchers. The strong reliance placed upon judgmental evaluations of difficulty of teachers and educators according to all respondents in the present survey also suggests a need for study. Recent investigations have found teachers' abilities to evaluate difficulty in textbooks in terms of grade levels to be inconsistent with other measures of difficulty (Miller and Marshall, 1978). Attention to instruction currently given teachers and prospective teachers that will enhance their judgments in this respect is strongly suggested.

Additional evidence concerning testing methods used to confirm reading levels for students is also needed. Present data find educators use oral reading tests most often and publishers generally use multiple choice tests. This information appears to support the previous contention that educators' concern for suitable reading level may be oriented toward individuals, whereas publishers' concerns may be more group oriented. One might suspect, however, that the use of different testing methods for confirming suitable reading level may yield different outcomes. Thus, teachers and publishers need to be aware of the methods used for confirmation by their counterparts.

What insights are offered by the present study to the understanding of suitable difficulty levels for students' instructional materials? Findings give preliminary evidence that current ideas of suitable difficulty levels may differ for textbooks used in different subject areas, for those used by students of different achievement levels, and for textbooks used for individual instruction or according to the number of students in instructional groups. Suggestive evidence is also found that teachers in urban and non-urban schools may differ in their ideas of suitable reading levels and that differences may exist in difficulty preferences of primary teachers, upper elementary teachers, and specialists.

Preferences revealed for slightly less difficult social studies textbooks and particularly for science textbooks in comparison to reading textbooks deserves attention. Indeed, content subject textbooks are often considered more difficult than reading textbooks due to difficult concepts and technical information that they must present. Yet, whether these books should be less difficult must be examined further, for evidence has shown that content textbooks have value beyond that of conveying information. They are also needed to teach the process of extracting information from books as well as for providing practice necessary to reach a high level of reading maturity (Chall, et.al., 1977, p. 64).

Indications that ideas of suitable difficulty levels vary according to students' reading achievement levels are also worthy of comment. Publishers and particularly educators prefer difficulty levels in advance of achievement levels of high reading achievement groups. For middle reading achievement groups, respondents prefer difficulty levels equal to or slightly in advance of reading achievement levels. Preferences expressed for these two groups seem consistent with theoretical constructs of the relationship between difficulty of instructional tasks and characteristics of students considered necessary for learning to take place. (See page 2.) Preferences expressed by many respondents for less difficult reading levels in relation

to achievement levels for low reading achievement groups is not, however, consistent with theoretical recommendations. If some level of challenge is necessary for learning, as theories suggest, one must speculate upon whether students with low reading achievement levels are receiving instruction in texts that present such a challenge.

Suggestions for variables to be considered by future research studies are also found in present data. The number of students in classes or instructional groups, the grade level of students, and the metropolitan level of schools may be related to instructional decisions and should be considered in subsequent studies of classrooms.

In conclusion, it must be emphasized that the findings of this exploratory study are intended to describe rather than to prescribe. Any generalization of findings must be limited to elementary schools and elementary school textbook publishers. Findings must also be interpreted with regard to constraints of survey research methods. Furthermore, as argued by Rosenshine (1978), expressed views may not always be consistent with actual practice. Indeed, observational studies are imperative to further this beginning effort toward understanding ideas of suitable difficulty before efforts to specifying these levels are undertaken. The present study does, however, offer direction for studies regarding this issue and emphasizes the importance of efforts toward determining suitable difficulty levels in instructional materials presently used by all elementary school students.

FOOTNOTES

1
See, for example Bloom, 1976, page 215; Bruner, 1960, page 9; Carroll, 1963, page 726; Piaget, 1970, page 153; Vygotsky, 1978, page 9.

2
Other groups that share the responsibility of textbook selection (i.e., textbook adoption committees) will be investigated in a larger study "Textbook Difficulty, Reading Achievement and Knowledge Acquisition" (Chall, 1980) funded by the Spencer Foundation, of which the present study is a part.

3
Names of contact persons in publishing firms were provided by Mary McNulty, Staff Director of the School Division, American Association of Publishers. Her assistance and that of the School Division Research Committee to the present study is gratefully acknowledged.

4
Names for educator respondents were obtained from Market Data Retrieval. Respondents were selected according to the three metropolitan status categories of schools used by the firm and checked for consistency with those used by the Federal Census Bureau.

5
Preferences of respondents for suitable reading level are compared to other considerations in textbooks selection and production. Items presented for comparison in Tables 1 and 2 were suggested by published criteria for evaluating instructional materials (i.e., EPIE, Criteria for Reviewing Educational Products, ERIC Document ED 164 014) and tested in pilot interviews with educational publishers, teachers, and specialists.

6
Techniques and testing methods presented in the questionnaires come from studies of the evaluation of difficulty in written materials and were tested in pilot interviews with educational publishers, teachers, and specialists.

7
Differences in responses to the item representing concept difficulty may have resulted from differences in wording presented in questions for publishers and educators. See Tables 7 and 8.

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